CLAIMS

1. Use of recombinant vectors of viral origin, incapable of replication and capable of being recognized by the receptors of human and animal muscle cells which can be infected with these viruses, these viruses being in addition modified by a nucleic acid insert containing a nucleotide sequence coding for a polypeptide sequence, the expression of which in the said muscle cells is sought this sequence being under the control of a promoter recognized by the polymerases of these cells for the production of a drug composition which can be administered by the general route, in particular the intravenous or intraarterial route, and is designed for the treatment of either diseases affecting the muscle cells or diseases, the localization of which in the organism makes them accessible to the expression products of the above-mentioned nucleotide sequence secreted by said muscle cells.
2. Use of vectors according to Claim 1, characterized in that these vectors are selected from defective adenoviruses, the genomes of which lack essential sequences necessary for the replication of these adenoviruses, and more particularly the EA and EB transactivators.
3. Use of vectors according to Claim 1 or Claim 2, characterized in that the nucleic acid insert is included in a defective adenovirus genome comprising nonetheless all of the essential sequences necessary for the encapsidation of these adenoviruses.
4. Use of vectors according to one of the Claims 1 to 3, characterized in that the nucleic acid insert is constituted by all or part of a healthy gene for dystrophin.
5. Use of vectors according to one of the Claims 1 to 4 for the production of a medicine designed for the treatment of Duchenne's muscular dystrophy.
6. Use of vectors according to any one of the Claims 1 to 3 for the production of drug compositions for the treatment of cardiac diseases, characterized in that the nucleic acid insert codes for a protein or polypeptide having thrombolytic properties.
7. Recombinant vector characterized in that it is constituted by a defective genome of an adenovirus, nonetheless comprising all of the essential sequences necessary for the encapsidation of this adenovirus, and in which is inserted a recombinant nucleic acid, the diffusion of which into the

muscle mass is sought , this nucleic acid being placed under the control of a promoter capable of being recognized by the polymerases of the muscle cells, in particular the strong promoter of the E1A early region of the genome of the adenoviruses.

8. Recombinant vector according to Claim 7, characterized in that the nucleic acid insert codes for a protein or polypeptide having thrombolytic properties.

9. Pharmaceutical composition containing a recombinant vector according to Claim 7 or Claim 8, in combination with a pharmaceutically acceptable vehicle.

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